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110411 #11



THE RETURN OF THE STYLUS SAMSUNG'S GALAXY NOTE



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CITY BIKE**
Riding High

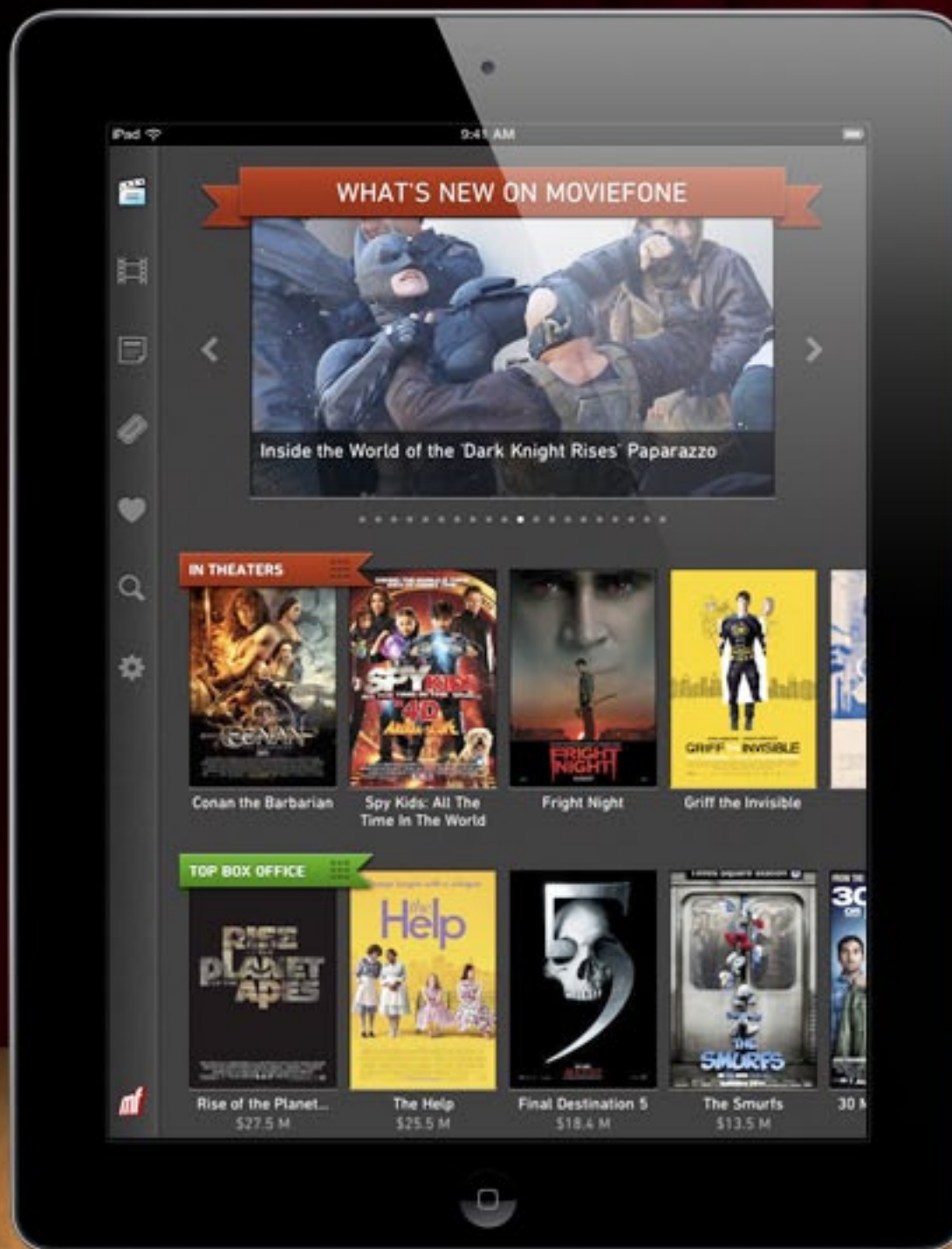
HTC RHYME
*Is it Really What
a Girl Wants?*

**MOTOROLA
ATRIX 2**
Just Another Sequel?

THE PENTAX Q BIG MONEY, LITTLE CAMERA

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Transformer Prime drops its disguise and Moto unveils the Droid 4

editor's letter

Hungry for Honeycomb? Got beef with our Pentax Q review? Now's your chance to sound off. Shoot us a line at distroletters@engadget.com and include your name, city and state / country. If you're lucky, you might just get a response in next week's issue.

After a few weeks of major hoopla surrounding product releases, this week was a bit less... dramatic. That's not to say that the pace of news slowed down — it seems like everyone has a backlog of press releases to clear out before the year is through — but the stories tended to be slightly smaller in scale. Think basketball scores vs. hockey scores and you'll get the idea.

We learned a bit more about ASUS' hotly anticipated Transformer Prime, the follow-up to this year's sneaky tablet in disguise. The 10-inch device is said to be a mere 8.3mm thick and rock a quad-core NVIDIA Tegra 3 processor, but it won't be rolling in Ice Cream Sandwich at launch. It'll be a Honeycomb device to start, ICS upgrade to follow. We also got more pictures of its keyboard dock, which shares the corporate stylings of the company's recent Zenbook UX31. That, by the way, is not a bad thing.

Toward the end of last week,



HP issued an abrupt about-face in its plans to slice off its Personal Systems Group — you know, the part of the company that makes things you can buy. Speculation was that HP would follow IBM into the land of

indistinct “services” and vague “consulting” but, for now, CEO Meg Whitman is dialing back and keeping it all in the family.

She's not going so far back as to put the TouchPad into production again, though. HP confirmed that it is *officially* out of the tablets that quickly became 2011's hottest bargain buy after being slashed to prices so low they make Crazy Eddie look perfectly reasonable. BestBuy still has a few in stock, but to get one you'll have to buy an HP PC to go along with it. That's certainly one way of delaying our entry to a post-PC world.

In other tablet news, the Motorola Xoom 2 showed up in a Carphone Warehouse catalogue, the European retailer with an anachronistic name but a penchant for advertising unannounced products. The listing carried a

price of €400, or about \$550 — a figure that probably has little resemblance to its future American MSRP. The 8.2-inch, 16GB tablet looks to be Honeycomb 3.2 and is said to be “everything a tablet should be.” *Everything.*

We also got our first peek of the Motorola Droid 4, the latest in a long line of landscape QWERTY sliders. (The first of which served as my gateway drug to Android.) This guy has been given the corporate makeover (pinched-in sides are all the rage at Moto) and looks to offer LTE and a 4-inch display plus a new, expansive keyboard. No word on price or availability but hopefully this thing finds a quicker path to retail than the Bionic did.

When it does, it will certainly appear at Verizon, and we saw a leaked roadmap this week that seems to imply the curvy *and* curvaceous Galaxy Nexus won't make its own appearance until the very end of November — after Black Friday. The busiest shopping day of the year isn't necessarily the best day to re-up your contract anyway.

Sony announced it's buying out Ericsson's stake in Sony Ericsson, leaving us with just... Sony. The €1.05 billion deal will see Sony walk away from the featurephones of the past



The busiest shopping day of the year isn't necessarily the best day to re-up your contract anyway.



and embrace its Android-filled future — hopefully a future that sees a few more games hit the PlayStation Suite.

Sony also announced a \$305 million loss in Q2 and warned investors that the picture for the financial year won't be much rosier. Lenovo, on the other hand, posted \$145 million in profits, an 89 percent boost over last year. The company's PC and laptop shipments jumped by 35 percent and, if its Ultrabook is as good as it looks, that number might rise even higher by year's end.

Corner store hero Redbox raised its daily DVD rental pricing from \$1 to \$1.20, a sign

that all good things must end, but Tesla promised a new electric Roadster is coming in 2014, showing that sometimes those good things do come back.

This week we take another electric powerhouse for a ride: the Grace One City bicycle. We look at the incredibly tiny and impossibly cute Pentax Q ILC camera, and learn that big disappointment can come in small packages. Another IRL has us vacuuming floors and installing Ubuntu, and you'll be treated to three smartphone reviews. First is the feminine (not girly) HTC Rhyme. Then, we see if the Atrix 2 can fill the footsteps of its superphone predecessor. And, finally, we have the Samsung Galaxy Note, which blurs the line between phone and tablet and managed to capture our hearts. Get comfy, dig in, and see if it doesn't capture yours, too.



TIM STEVENS
EDITOR-IN-CHIEF,
ENGADGET

This way in



REVIEW
**Pentax Q
Interchangeable
Lens Camera**

BY ZACH HONIG

EDITOR'S LETTER
**TRANSFORMER PRIME
DROPS ITS DISGUISE AND MOTO
UNVEILS THE DROID 4**

BY TIM STEVENS



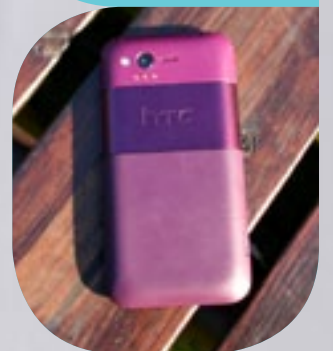
REVIEW
**Grace One City
e-motorbike**

BY TIM STEVENS



REVIEW
**HTC
Rhyme**

BY LYDIA LEAVITT



THE LAST WORD
**Who will emerge as
the next Steve Jobs?**

BY BOX BROWN

REVIEW
**Motorola
Atrix 2**

BY BRAD MOLEN



REVIEW
**Samsung
Galaxy Note**

BY ZACH HONIG



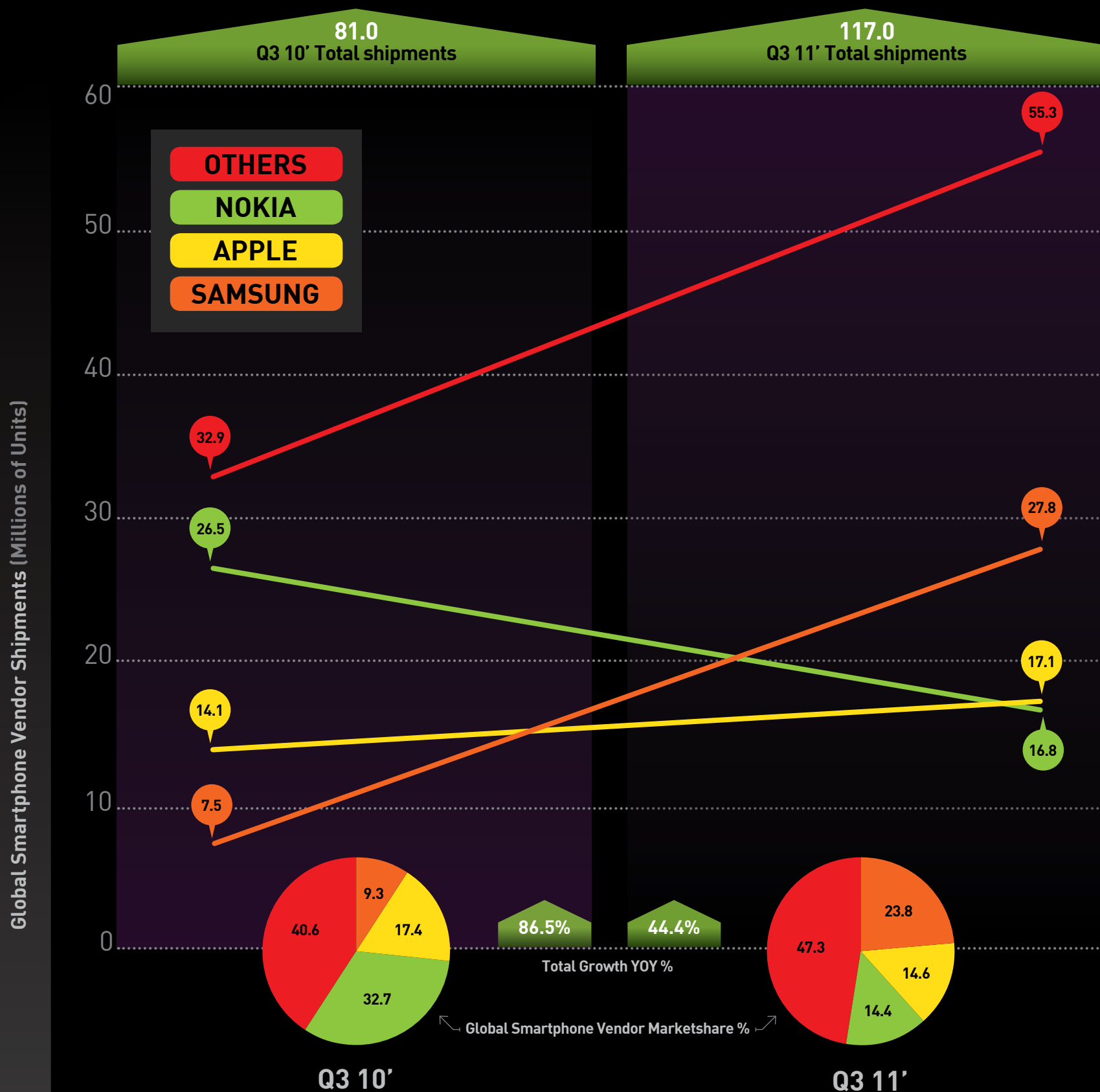
IN REAL LIFE
**Kingston Wi-Drive,
Dyson DC35 and being
an Ubuntu fanboy**

BY ENGADGET STAFF

STATS
**Samsung takes top spot
in smartphone shipments**

BY DARREN MURPH





Samsung claims top spot in global smartphone shipments for Q3 2011, Apple slips to number two

On this edition of As The Smartphone World Turns... we've got Samsung claiming its spot at the top of global smartphone vendors. Dramatics aside, the latest shipment figures tallied up by Strategy Analytics are showing that Samsung has overtaken Apple from a units-shipped standpoint, with Sammy moving 28 million smartphones and claiming 24 percent of the market share. Apple has fallen a rung with 15 percent, and Nokia is slotted third with just 14 percent of the global share. — *Darren Murph*

the weekly stat



review

Motorola Atrix 2

BY BRAD MOLEN

We've seen a lot of game-changing devices this year, haven't we? 2011 has already witnessed the first Honeycomb tablets, the influx of LTE and the introduction of a boatload of smartphones with dual-core processors. One of those groundbreaking devices was the Motorola Atrix 4G, which we called the best smartphone at CES 2011 because of its powerful Tegra 2 SoC and simply innovative Webtop operating system with an accompanying LapDock. It was new, and it was powerful.

Not even ten months after the Atrix's February 22nd launch, we're already

seeing its successor, aptly named the Atrix 2. At the risk of sounding blunt, it's not a groundbreaking device — aside from a few bumps in specs, larger display and a fresh redesign, it doesn't offer the same level of showmanship or innovation so eagerly demonstrated in the first iteration. But does the sequel compensate for the lack of sizzle? How much does this improve over the original? Does the newest version of the LapDock satisfy? Read on to find out.

Hardware

Its last few flagships, such as the Pho-



ton 4G, Droid Bionic and Droid RAZR, lead us to believe that Motorola likes to think outside the box every now and then. These phones are designed to be fresh and surprising — sometimes it works, sometimes it doesn't — and we give kudos to the company for trying to be different. The Atrix 2 isn't one of those handsets. It's graced with smooth and elegant curves, rather than rough angles. Not only did Moto soften the corners; it smoothed out the sides and back as well. We admit that we're suckers for new and exciting design — it can be difficult to come up with new ways to reinvent the wheel, so it's nice to see

folks try — but there's definitely room in our book for handsets that look exquisite, regardless of how crazy.

We shouldn't be terribly surprised to see this handset bearing the same moniker as the original Atrix 4G that was released in February — the two have a close family resemblance, even if they have a few major differences. The most noticeable variations? No fingerprint sensor and a larger display, for starters, but there are plenty more feature changes lurking about the phone.

The Atrix 2 is wider, no doubt a negative side effect of having a 4.3-inch display, but it's just as comfortable to hold as the 4-inch original. At 4.96 x 2.59 x 0.40 inches (126 x 66 x 10mm), it's slightly taller and wider than the first iteration, which measured 4.64 x 2.50 x 0.43 inches (117.75 x 63.5 x 10.95mm). As you may have noticed, it's also thinner by nearly a full millimeter, but 10mm is still beefy in comparison to many of the latest slate phones. The new version's easy to grip, thanks to its curved sides and textured battery cover; it's no Kevlar cover, of course, and shouldn't be treated as such, but the soft touch plastic at least turns out to be easy on the eyes. That's a stark (and pleasant) departure in design from Atrix numero uno's back and its occasionally blinding holographic pattern.

We also enjoyed using the screen on the Atrix 2. First, while both Atrix devices (Atrices?) take advantage of qHD displays with 960 x 540 resolution, the newer one looks better despite having a larger display to hold the same

SPECS	MOTO ATRIX 4G	MOTO ATRIX 2
Display size	4.0 inches	4.3 inches
Display resolution/type	qHD (960 x 540), PenTile	qHD (960 x 540), non-PenTile
CPU	1GHz Dual-core Tegra 2	1GHz dual-core TI OMAP 4430
RAM	1GB DDR2	1GB DDR2
GPU	ULP GeForce (300MHz)	PowerVR SGX 540 (304MHz)
Network speeds	HSPA+ 14.4Mbps	HSPA+ 21Mbps
Battery	1,930mAh	1,785mAh
Camera/video	5MP / 720p HD	8MP / 1080p HD
Front-facing camera	VGA	VGA

number of pixels. This is mainly because HelloMoto opted not to use the PenTile matrix scheme, which is something that the company has elected to do on most of its qHD screens — including the first Atrix and the Droid Bionic. The argument of PenTile versus non-PenTile will rage on for years; regardless of how polarizing that discussion has become, though, there's still a noticeable difference in quality when both phones' displays are pitted side by side. The sequel seems to do a much more manageable job against the glare of direct sunlight, and the Gorilla Glass stretches out from one edge to the other, indenting roughly a millimeter or so away from the side to let your finger brush right off the phone when you're using gestures.

Rounding out the front face of the phone is the same standard set of four capacitive touchscreen buttons near the bottom — menu, home, back and search — and the VGA camera that doubles as video chat and vanity mirror. Skipping

over to the right, you'll see a volume rocker along with a wonderful addition to the new Atrix: a physical camera button. The one teeny little catch is that it's only single-stage (more on that in the camera section). Featured on the top is the 3.5mm headphone jack and standard power button / screen lock — a likely indication that the fingerprint sensor in its predecessor wasn't as popular as Motorola might have hoped.

At first glance the left side of the phone appears to have the same exact micro-USB and HDMI combo as the first Atrix, though we'd be remiss not to leave out one glaring variation: the ports are flipped upside-down to utilize the same Webtop accessories as the Droid Bionic and Photon 4G. Remember Motorola CEO Sanjay Jha's promise that every high-end smartphone will have Webtop capability? Rejoice, for his word is now being fulfilled.

Let's not forget the back of the device. It's got its fair share of goodies too, after

all — packing an 8 megapixel camera with LED flash and 1080p HD video capture is no trivial matter, especially on a phone with a \$100 price point. The backside of the Atrix 2 doesn't offer much in the way of decor otherwise, unless you count the textured cover and speaker grille — which, by the way, sounds great... until you put the phone on its back, causing the sound to get severely muffled.

Underneath the cover, you will find a 2GB microSD card hiding just above the 1,785mAh battery (a decrease from the original Atrix's 1,930), which means that, when coupled with 8GB of internal storage space, it has still been trimmed by 6GB total — and keep in mind that only 4.5GB of the built-in memory is user-accessible, which doesn't help matters much at all. The microSD card can be swapped out with a full 32GB model, but the first iteration of the series still has the highest amount of storage capacity.

The Atrix 2 also raises the bar in terms of network performance, getting a lift to 21.1Mbps HSPA+ over the original's 14.4Mbps. The higher speed vaults the device into the top tier of speed that AT&T currently offers, placing it into the same 4G echelon as the Samsung Galaxy S II. We're intrigued as to why the usual "4G" moniker was left out of the phone's name this time, especially given that it's faster, but by no means do we miss its presence. Sadly, the area we reviewed the device in isn't within the scope of Ma Bell's fastest net-

work class, so we were unable to offer a proper comparison test between the two models.

Software

First off, let's give credit where it's due: AT&T came incredibly close to making its entire collection of preinstalled apps uninstallable, and only came up short on Mobile Hotspot and Music Store. It's true, folks: bloatware is one step closer to being completely optional, rather than a required piece of real estate to clutter up your screen. We're not saying it's a perfect system yet, but Motorola's latest UI — the non-MotoBlur variety — at least allows for customized categories within the app menu as a type of olive branch. We still prefer the method employed on TouchWiz 4.0, which simply lets you add actual folders as their own icon in the app menu, but this is at least a workable solution.

Since Music Store's on there for good, it's best to at least know a little about it. Frankly, the name gives away the description: it's an easy-to-access hub that allows you to purchase songs, albums and ringtones. On the hub's front page you'll see the top releases, but you can perform a search for whatever tunes you're in the mood for. Speaking of the beats, Motorola's thrown in an FM radio that can be accessed through the device's built-in music player, which is nice to see amongst other options like direct access to Shoutcast internet radio and podcasts.

Moto's non-Blur UI comes with a few

preinstalled apps of its own (not uninstallable, unfortunately). Social Location lets you view local businesses to not only see details, Yelp scores and hours, but also check Facebook to see if any of your friends have checked in recently. Sticking with the social theme, Social



Networking functions as an all-in-one feed for Twitter, Facebook, Flickr and the other usual suspects. On our particular unit, however, navigating and interacting through this hub was an incredibly sluggish experience, no matter how many times we gave it our best shot. ZumoCast is a syncing application that lets you check out pictures, movies

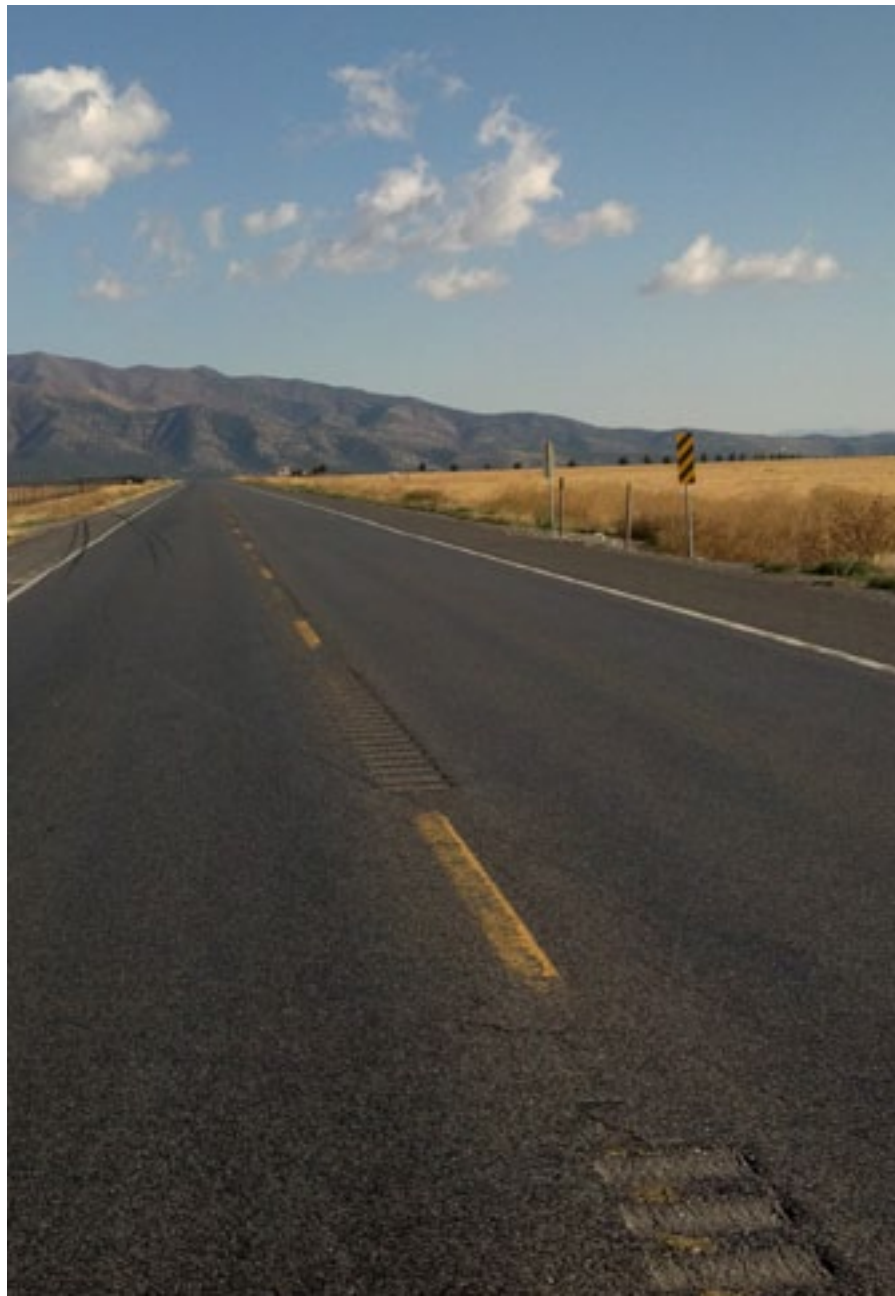
and music (among other files) from your desktop directly on your Atrix. Lastly, Motorola also offers its own Phone Portal, which connects with the app of the same name on your computer and lets you manage files you need to transfer between your handset and desktop.

Much like the Atrix 4G, the new model also supports in-pocket detection. It is meant to lock the phone automatically when it senses that it has been placed in your pocket, but it doesn't seem to like our loose jeans; it works great when placing our phone in our breast pocket, going into sleep mode within three seconds, but that's the only place we've found a lot of success. In short, results may vary depending on your pocket preference.

Camera

The Atrix 2 definitely took a page out of the Droid Bionic's book here, using not only the same 8MP sensor and 1080p HD video capture, but the same camera UI as well. It's easy enough to use, offering most standard settings we've come to expect on a decent phone camera: scene modes, macro focus, panorama mode, brightness adjust, and geotag are all there. Missing are the exposure / contrast adjust and ISO, both settings that we use regularly on a DSLR.

We're glad to see a hardware camera button, though we were put out to find that it's single-stage. Rather than having the option to hold down the button to lock focus prior to taking the shot, it sometimes took a few extra seconds



BENCHMARK	MOTO ATRIX 4G	MOTO ATRIX 2
Quadrant (higher is better)	2,588	2,548
Linpack (MFLOPS, higher is better)	40.2 (single), 65.6 (multi)	40.7 (single), 63.6 (multi)
Nenamark (fps, higher is better)	46.2	50.1
Neocore (fps, higher is better)	54.4	58.4
SunSpider 9.1 (ms)	3,803	4,026
Vellamo (higher is better)	670	698

to focus after depressing the shutter before actually taking the shot. Happily, this wasn't as annoying as it usually is. The camera was smart enough to know when it didn't need to refocus, so fortunately we were able to take several pictures with virtually no shutter lag for this reason. Furthermore, we discovered that the camera would automatically focus — and lock it again — whenever we shuffled around, which helped our shutter-lag time stay down a bit.

Our experience with the camera was a mixed bag. Pictures taken in overcast conditions turned out perfectly fine, and low-light shots turned out well as long as we weren't trying to capture a sunset. However, our images in direct sunlight were a wild card; we were able to take some great pictures with decent white balance, but we found occasions in which the image turned out much darker than we'd expected, without us changing locales or camera settings. It seemed as though the camera was trying to overcompensate its exposure, and while it made for some cool artsy

images, we weren't quite satisfied to see such varying results.

The video capture has been bumped up to a max resolution of 1080p HD, and we found little to hate here. We couldn't see any lag or choppy effects when trying to capture moving objects besides our own shaky hands, though there was the occasional attempt to readjust the focus when filming closer objects. Aside from that, this camcorder will more than suffice for your home videos.

Performance and battery life

They just don't make phone sequels like they used to. The Atrix's 1GHz dual-core Tegra 2 CPU was considered top of the line at launch, but ten months in a fluid and dynamic industry is enough time to dethrone any state-of-the-art component. Motorola Atrix the Second, choosing to trade in the NVIDIA chip for a TI OMAP 4430 with the same clock speed, appears to be more interested in settling into a midrange price point than trying to break new ground — it's totally fine if that's the initial intent, but

it also means that you shouldn't expect any massive performance boosts over the first edition. Considering its Droid RAZR cousin will be packing a 1.2GHz OMAP 4430 CPU, we would've preferred to see the Atrix 2 match wits.

As you can see from the benchmark comparison, there's no cut-and-dry champion in the performance battle between the Atrix 4G and its younger brother. We couldn't see a clear winner in real-life scenarios, either — the Atrix 2 may be slightly affected because it's using a different chipset and offering a larger screen, but the two devices were still nearly neck and neck to us. We're not harping on the sequel's performance, mind you: the phone was still incredibly responsive, could handle most heavy tasks with ease and never crashed, so it was definitely acceptable (especially for a phone at its price point). But we're still curious why the second version didn't make any attempt to raise the bar *besides* switching to OMAP, especially when it has to take up the task of being the LapDock 100's entire brain, which requires a healthy chunk of processing power to work smoothly.

Battery life was noticeably better on the newest Atrix, despite the smaller juicepack powering it. Lasting for five hours and ten minutes in our standard video rundown test, it survived a full hour longer than the Atrix 4G. Of course, most of us use our phones for more than just watching videos all day, and the battery will make it through the course of a full day with moderate use.

If you end up playing graphics-intensive games or doing some heavy multitasking, you might make it through the business day, but we'd recommend having some sort of charger with you just to play it safe.

Motorola also offers several power management options in the settings to help reduce the amount of battery getting gobbled up; it can conserve power overnight as you sleep, set it on maximum savings mode, or you can even set up your own custom profile to tweak the power as you see fit.

Need your phone to actually, you know, make calls? The Atrix 2 gave us little to worry about here, with above-average call quality and a well-crafted speakerphone that we could hear loud and clear. Audio playback for music and videos was wonderful — as long as we didn't muffle up the speaker grille on the back. We also found no issue with the device's GPS tracking abilities.

LapDock 100

Remember how crazy the idea of Webtop and laptop docks were when we first heard about them (for a refresher course, check out our review of the Atrix 4G)? It wasn't the first time we'd heard of such a concept, but it had a fair amount of potential — as long as it could work across the board and was offered at a friendly price point, we could see it being successful. But the state of Webtop at the Atrix 4G's launch made us think twice. The LapDock, as beautiful as it was, came in at a cost that eclipsed most



netbooks; it was available for only one Motorola phone, despite Sanjay Jha's assurances that it wouldn't always stay that way; and it wasn't fast enough for us to welcome it with open arms. Now, the price has gone down, more laptop docks are available and they're no longer a proprietary accessory.

If nothing else, the LapDock 100 (\$200) is a significant improvement over the previous version for one simple fact: it's a universal solution. Since it uses a cord-like dock instead of something built into the LapDock itself, it's designed to work with almost every Webtop-capable smartphone already made (the original Atrix 4G excepting) and any new high-

end Webtop phone going forward. The value of such a device is much higher now that it's not exclusive to just one handset — imagine how beneficial it could be to a customer looking to upgrade from one Motorola Android device to another, and being able to keep the same Dock across the board.

Motorola Atrix 2 accessories

Motorola's design team had some definite hits and misses with the new model. When we first laid eyes upon the LapDock 100, we were instantly reminded of an old-school electric typewriter. And no, that's not a good thing. We enjoyed the sleek, flat and mod-

ern look of the original LapDock, and were disappointed to see the “new and improved” version end up marginally thicker and not as aesthetically pleasing (read: ugly). Rather than staying flat all the way back, it arches up the first two-thirds and abruptly angles down the final third. But it wasn’t designed this way for kicks and giggles; it’s actually done this way to offer a better viewing angle. Since the original was flat, its screen wasn’t able to go back far enough, making it rather hard to achieve an optimal viewing angle whilst on the user’s lap. If the LapDock doesn’t work well on the user’s lap, the purpose is miserably defeated. Version 100 does much better at hitting the preferred angle.

Cosmetically, there are a few other enhancements to consider. The new iteration is smaller, using a 10.1-inch display (compared to the elder’s 11.5-inch screen); it’s roughly 0.2 pounds lighter, too, weighing in at a lean 2.2 pounds (less than 1kg). It has a smaller touchpad, but Motorola made sure to add in two-finger scrolling gesture support this time around, a very welcome addition. Much like its older brother, this LapDock offers the same twin USB ports and power socket in the back, but throws in a battery status indicator for good measure. Lastly, the keyboard has been completely reworked, morphing from a modern look with chiclet-style keys to a more standard netbook ‘board, with the keys smaller and more scrunched together.

If the Webtop software has any addi-

tional functionality, we had a hard time finding it. Just as before, the screen lights up just seconds after you pop the phone into the flexible jack, bringing up the familiar phone view on the left, app menu on bottom and your browser on the right. Familiar is the key word here: aside from slight changes in some of the icons and Firefox getting an upgrade to version 5.0 (up from 4.0 previously), everything has stayed largely the same. Unfortunately, that also includes the same sluggish performance we’ve seen in the Webtop environment ever since we first played with it in February. Ultimately, this is where we really would’ve liked to see a faster CPU powering the brains of the operation. We still love the idea of a laptop dock — the option of plugging your phone into a portable keyboard / screen and letting it run the show — and now that the cost is reasonable, all that’s left to catch up is the actual Webtop experience itself.


Love the idea of a laptop dock but think the 100 is just too small? Perhaps it looked at you the wrong way? Fortunately it is not the only option for your Atrix 2. You will also be able to grab the LapDock 500 (\$300), which is sized more like a a real-life laptop and offers a 14-inch screen, front-facing camera and ethernet support. We haven’t received a unit to play with yet, so we’ll withhold casting a firm yea or nay vote on it for now, but it’s at least worth mentioning that Team LapDock is expanding with more variety.

As Motorola likes to do with its high-

end smartphones, there are a few other accessories that you can grab to either enhance your Webtop experience or make your life convenient outside of the house. We discussed the HD Station and vehicle navigation dock in good detail in our review of the Droid Bionic, so head on over in your extra-curricular activities; the other accessory not covered already, however, is the Motorola P793 Portable Power Pack. We received it in our shipment alongside the Atrix 2, but it's actually universal. Devices can get powered up via its microUSB charger or standard USB port, and we imagine that almost every single gadget can get juiced up using one of these two methods.

Wrap-up

So here's the lowdown on the Motorola Atrix 2: it's the Atrix 4G with a slight redesign and a few refreshed specs.

That's all there is to it. We enjoyed our time with the sequel and it fits the \$100 price tag (with a two-year commitment, of course) wonderfully, but anyone looking to purchase the device shouldn't be expecting the groundbreaking smartphone its predecessor was when it first launched. Thing is, it doesn't have to play the role of game changer to be a high-performing device that can do just about anything you need it to do. Absolutely *have* to have that fingerprint sensor? Stick with the Atrix 4G. Otherwise, the Atrix 2 will be a solid performer that takes the good things from its predecessor and improves upon it. You can't go wrong with that for a Benjamin, right? 

Brad is a mobile editor at Engadget, an outdoorsy guy, and a lover of eccentric New Wave and electro. Singer and beatboxer.

BOTTOMLINE

Motorola Atrix 2

\$100.00

PROS

- High performance for its price range
- Beautiful non PenTile qHD display
- Elegant design
- Good call and speaker quality

CONS

- LapDock and Webtop still need work
- Camera experiences some shutter lag

If you're looking for a high-end handset at a midrange cost, the Atrix 2 is a solid choice with plenty of goodies.



review

Pentax Q interchangeable lens camera

BY ZACH HONIG

Most of the interchangeable lens cameras we've seen to date seem to follow a standard mold: they have similarly sized bodies, comparable designs and either an APS-C or Micro Four Thirds sensor at the core. But recently, some manufacturers — namely, Nikon and Pentax — have begun shrinking camera bodies in an attempt to make them even more appealing to point-and-shoot users. The result: a smaller, lighter, more fashionable ILC — that

also happens to have an itty bitsy image sensor. Sensor size, not megapixel rating, translates directly to image quality, but also lens and body size, so you can either have an incredibly small body with an incredibly small sensor, or a larger body with a larger sensor. Are you willing to pay a premium for the “world’s smallest” interchangeable lens camera, even if it has the same size sensor used in many point-and-shoot cams available for a fraction of



the cost? Pentax seems to think that you are — to the tune of \$800.

The 12.4 megapixel Pentax Q is tiny — it's so small, in fact, that you wouldn't be alone in mistaking it for a toy. There is a fully functional camera inside that petite magnesium alloy housing, though it's admittedly not as powerful as you'd expect an \$800 camera to be. The pricey kit ships with an 8.5mm f/1.9 lens, and you can grow your collection from Pentax's modest selection of Q-mount lenses, which also happen to have laughably small focal lengths (a 3.2mm fish eye, anyone?), due to the 1/2.3-inch backlit CMOS sensor's massive 5.5x

multiplication factor. So how does the Q fare when it comes to performance and image quality? Read on to find out.

Hardware

We would be doing the Pentax Q a disservice by not focusing on its adorably compact size, since, after all, that's by far its strongest selling point. Measuring 3.9 x 2.3 x 1.2 inches, the Q is absurdly small — even advanced point-and-shoot cameras like the Canon G12 tower over it. But despite its modest size, the camera is still quite usable, with a handful of dedicated buttons offering direct access to key settings,



and a customizable front dial launching a variety of creative modes

The camera's rear is dominated by a 460,000-dot, 3-inch LCD with a 100-percent field of view and roughly 170-degree viewing angle. The display is recessed slightly, so while you can see it fairly clearly when viewed from above or below, some on-screen indicators may be blocked by the camera housing, depending on the angle. The display is bright enough for use in sunlight, and offers an adjustable color temperature — though you'll want to take any adjustments into account when previewing

white balance settings. Oddly, the live and playback images you'll see on the display don't appear very sharp, despite its moderate resolution, making it difficult to use the LCD to manually focus or verify sharpness in playback mode.

To the right of the LCD, you'll find exposure compensation, delete, ISO, info and menu buttons, along with a five-position selector with dedicated buttons for flash mode, ISO, shutter release timer, white balance and an OK button. Up top, there's a flash release, playback and power buttons, and an elevated shutter release. A front dial

offers direct access to shooting modes, including auto, program, shutter-priority, aperture-priority, manual, Blur Control and scene modes. An identically sized dial is positioned directly behind, and serves multiple functions depending on the mode — in Blur Control, for example, turning the dial to the right decreases the depth of field (we'll revisit this later on).

There's an SD card slot on the right side of the camera and a battery slot on the left. A micro-HDMI port and proprietary PC / AV connector are secured beneath a protective rubber flap on the bottom, just to the left of the tripod mount. As you'll find on any ILC, there's a tiny lens release button on the front of the camera — pressing it lets you rotate an attached lens counterclockwise for removal.

Like the Nikon J1, the Q includes a clever retractable flash. Flipping the flash slider releases a three-position arm, allowing the flash to rise above the lens for unobstructed coverage, while reducing the amount of space it occupies when docked to the left of the full-size hot shoe. Unlike the J1, however, the Q's flash also functions while retracted, and you can tilt it vertically as well — overall, it's a very impressive design.

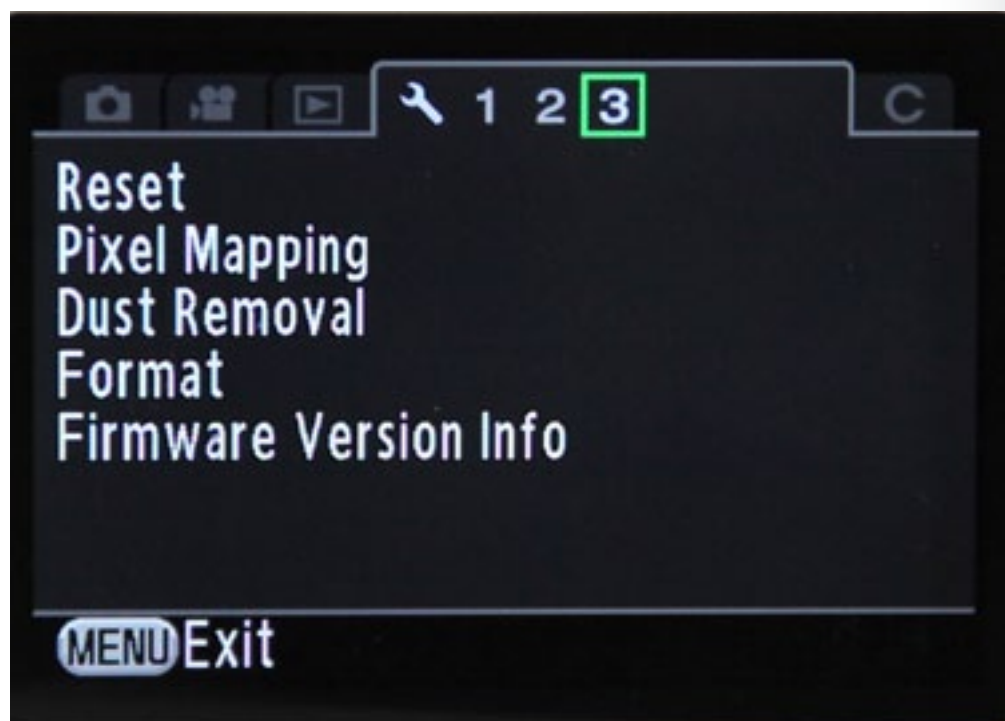
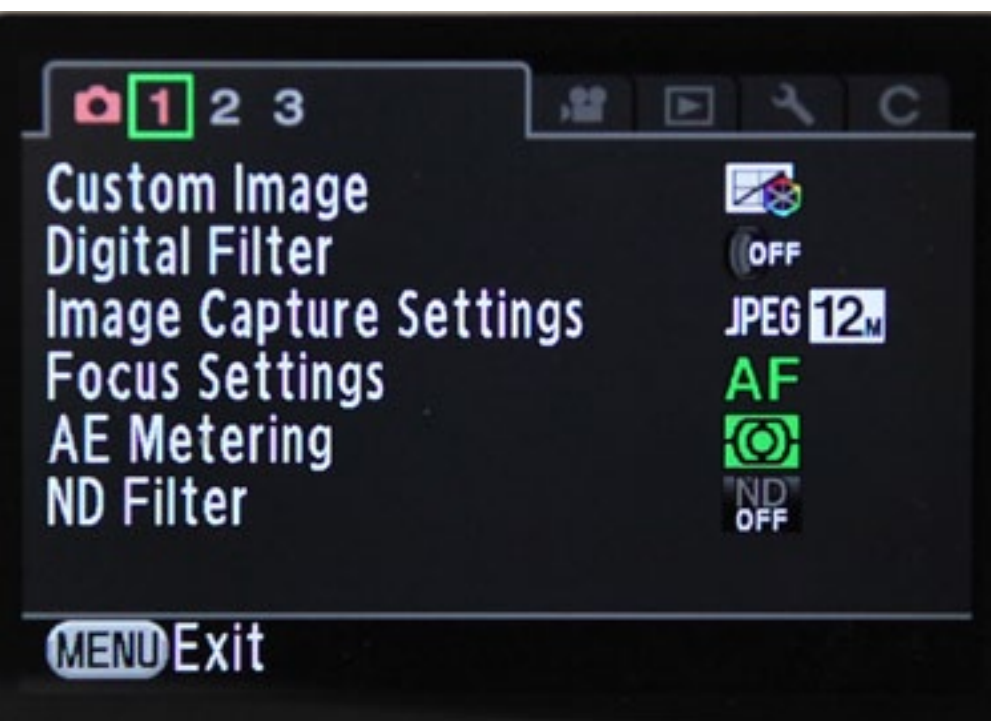
Like any interchangeable lens camera, the Pentax Q is only as good as its glass, and the lens it ships with looks and feels like a showroom mockup. It's constructed of plastic, though it does employ a metal mount. It's so lightweight, however, that you can toss it

in your shirt pocket and easily forget that it's there — that would be great if it performed well, but unfortunately that isn't the case.

The Pentax 01 Standard Prime that ships in the box is just one of the five lightweight plastic silver lenses that are compatible with the Q. The 02 Standard Zoom Lens (\$300) includes a 27.5-83mm equivalent focal length with an f/2.8-4.5 maximum aperture — it weighs just 3.39 ounces. The 03 Fish-Eye (\$130) offers a 17.5mm equivalent focal length and a fixed aperture of f/5.6, while the 04 Toy Lens Wide (\$80) offers a 35mm equivalent focal length with an f/7.1 fixed aperture. Looking to have some fun while getting a bit closer to the action? The 05 Toy Lens Telephoto (also \$80) packs a 100mm equivalent focal length and an f/8 fixed aperture. That means three out of the five available lenses are intended for casual shooting, though as you'll find after reading the rest of this review, it's quite clear that the Q isn't destined for any pro's kit.

Performance

Mediocre cameras don't carry \$800 price tags, right? They cost \$150, or \$99, or \$39 in the "As Seen on TV" bin at your local pharmacy. When you spend nearly a grand on a camera, you expect the very best, and we think you should get it just the same. The Pentax Q is not the very best, however. It's small. It's cute. It's diminutive and light enough that a child can likely hold it quite comfortably. But



it is not the best. No, not even close.

There's nothing impressive about the Q's performance. It's sluggish to boot and focus, and while it offers a continuous shooting mode that captures up to five frames per second, its buffer only supports five continuous captures — in other words, you can capture five frames per second, but only for one second. There's also a 1.5 fps mode that lets you snap 100 consecutive images — both speeds support full resolution JPEGs, though only the slower mode allows for RAW capture. The Q's boot speed is noticeably slow, taking five full seconds from power-on to first image capture.

Shooting a frame after the camera is already on can take up to a second from the time you press the shutter release. In other words, if you're trying to take a photo in the moment, there's a very good chance it'll be over before it fires.

We're also slightly perplexed by a few issues we've had while trying to record video. The first is quite a doozy — fairly often, pressing the shutter release in record mode will simply cause the camera to lock up. A video file is created, but no footage is captured. Pulling out the battery is the only option for recovery, so if you happen upon a scene that you want to capture right away, having a

camera that occasionally fails is far from ideal. For example, when “You Can Call Me Al” by Paul Simon was accidentally blasting throughout the newsroom last week, our attempt to capture the excitement was foiled by a Q that decided to get an early start on the weekend, taking a long unapproved nap.

The second issue is also quite significant, but can likely be fixed with a firmware update. Even when holding it perfectly still, the camera appears to be tracking subjects that walk into the frame, resulting in the video jumping to the left or right. And finally, the Q doesn’t begin recording audio immediately at the start of a clip. You can correct this by cutting your clip in a video editor, but the first second or so of each clip gets the silent treatment.

One of the most frustrating performance issues with the Pentax Q is the camera’s absolutely pitiful battery life — worse than any cam we have used in recent memory. During one day of shooting, the 940 mAh battery lasted for fewer than two hours, allowing us to capture about 230 photos and roughly five minutes of 720p video. It’s lightweight enough to carry around on a full day of touring, but if you tend to shoot more than a couple photos every few minutes, 230 stills certainly does not cut it.

Image quality

When reviewing images produced by the Q, there’s nothing to indicate that they were shot with an interchangeable lens camera. Everything in the frame

is in focus at f/1.9 — most of the time — though not overwhelmingly sharp. Images shot at lower sensitivity settings (ISO 100-200) appear clean and free of noise, even in the shadows, while noise becomes noticeable, though not overpowering, at ISO 500, likely due to the camera’s auto noise reduction feature, which compensates for noise by reducing sharpness. The built-in flash is small, but reasonably powerful — it was able to light our sizable workroom. The camera did a fine job adjusting white balance in bright daylight, but indoor shooting didn’t yield the same result — most images appeared with a slight yellow tint. Images shot in low light were also often out of focus and underexposed. Noise was even an issue outside, in images shot at ISO 500.

Advanced shooters will be relieved to find that the Q does in fact shoot RAW, even taking its uncompressed shooting abilities a step further, adding the unique option to save a RAW version of the last captured image, even if you’re shooting only JPEGs. It won’t work for high-speed continuous shooting, but if you happen to snap a frame that you really don’t want to lose, but failed to properly adjust the exposure or white balance, you have the option to save a buffered RAW version, essentially letting you step back in time to right a wrong. We haven’t found a need for this function during our test shoots, but we can definitely see how it could come in handy at some point. It is a clever addition either way — one that



we would love to see other manufacturers adopt as well.

Shooting modes

The Pentax Q includes auto, shutter- and aperture-priority, program and manual modes, just like any other interchangeable lens camera. But it also features a handful of scene modes — some typical, like macro and Night Scene, but a few that we haven't seen before, like Forest, which “enhances colors of trees and sunbeams through foliage and produces a vivid color image.” Hovering over each scene mode brings up a complete description, though most graphics are quite accurate — a fork and knife for the Food shooting mode, for example.

One of the effects synonymous with DSLR shooting is shallow depth of field — crisp subjects with smooth, creamy backgrounds. Despite the kit lens's f/1.9 aperture, however, the Q is quite limited when it comes to this feature, due to its incredibly small sensor. Pentax has added a Blur Control mode to help battle this issue, which contrary to its name doesn't reduce blur, but instead increases the blur amount by capturing multiple frames with different focus positions, compiling them into a single image. You can use the rear “e-dial” to adjust the amount of blur. It works fairly well, keeping your focal point sharp while blurring the rest of the image, but advanced photographers won't have any issue noticing that a digital filter was used.

User interface

For one reason or another, manufacturers always seem to struggle with system menus — even some of the most powerful (and most expensive) DSLRs have frustrating menu layouts that leave you constantly searching for obscure (and even some often-used) settings. The Pentax Q's no-frills interface isn't pretty, but it is generally intuitive and easy to use. The main system menu is arranged on a simple grid. You need only navigate to the left or right to load a new page of settings (there are a total of ten) — scrolling up and down lets you select only the options already visible on the page. Most of the functions have dedicated controls, as we have already outlined, so you should only need to visit the main menu to adjust top-level settings.

The competition

So, you've saved up your \$800, and you're ready to buy a new interchangeable lens camera. Do you take the plunge and pick up a tiny Q? Do you opt for a much less expensive point-and-shoot camera with image quality that rivals Pentax's ILC runt? Or do you put it all towards a competitor's model that's not quite as slim, but will almost certainly make up for what it gains in size with excellent performance? If you need a camera to always have around, then you'll probably want to opt for a point-and-shoot, but if you're set on adding a new mirrorless cam to your collection, you're surely not without



Photo Details: Shot at f/1.9 at 1/125 second with an image sensitivity of ISO 250. The camera exposed this late-afternoon scene properly, with few blown highlights and accurate white balance.



sample
images



Photo Details: This scene was photographed at f/2.2 at 1/160 second with an image sensitivity of ISO 250. Details are acceptably sharp, but noise is noticeable in shaded areas when viewed at full size.

some top-notch options.

Sony's NEX-C3 has been, and still remains, our first choice in the mirrorless category. While still compact, it's significantly larger than the Pentax Q, though its APS-C-size sensor offers far superior image quality, shallow depth of field and improved low-light performance. Oh, and it costs just \$600. While a bit pricier at \$900, the Olympus PEN E-P3 remains our second choice, with a top-notch focusing system and an attractive design. And if style is what you are after, we were far from blown away by the Nikon J1's performance, but it's hard to argue that the \$600 ILC is ugly. Just don't get it in white (or pink).

Wrap-up

Pentax really has managed to design the world's smallest interchangeable lens camera — and yes, it does work. But there's no magic at play here. The Q is small because all of its components were downsized — Pentax took every-

thing from the lens to the image sensor to the mode dial and shutter release and gave them the shrink ray treatment. Everything but the full-size hot shoe, LCD and SD card slot are miniature versions of what you'll find on larger, more capable cameras. The result is an attractive, pocketable ILC that doesn't quite follow its powerful pedigree.

The Q is a very unique camera — one of a kind, even — but that doesn't mean it's the one for you. If money is no object and you're not keen on capturing incredible images and video footage, then perhaps you'll still consider picking up a Q. As for the rest of us — we're perfectly happy with our larger, much more capable ILCs, and wouldn't dare consider making such a sacrifice just to carry a bit less weight on our shoulder.

Zach is a Senior Associate Editor and heads up Engadget's features content. He's also a lifetime lover of everything aviation and photography.

BOTTOMLINE

Pentax Q

\$800.00

PROS

- Incredibly compact
- Option to save last image as RAW

CONS

- Very expensive
- Inconsistent image quality
- Short battery life
- Multiple issues with video capture

Pentax may have managed to create the world's smallest mirrorless camera with this \$800 ILC, but if image quality is more important than body size, the Q is not for you.

DISTRO | ISSUE #11 NOVEMBER 4, 2011



Kingston Wi-Drive, Dyson DC35 and being an Ubuntu fanboy

BY TERRENCE O'BRIEN, BRAD MOLEN, ZACH HONIG

Welcome to IRL, an ongoing feature where we talk about the gadgets, apps and toys we're using in real life and take a second look at products that already got the formal review treatment.

The lively comments in last week's Nest thermostat post got us thinking: for all our talk of smartphones and Ultrabooks, it's the mundane, not-glamorous stuff that we're spending most of our money on. Take Brad, for instance, who had to make room in his iTunes library for the *Aladdin* soundtrack and had to get creative after maxing out his iPhone's (non-expandable) storage. Or Zach, who felt not one, but two vacuum cleaners were necessary in his bachelor pad. And at least one of us avoids paying anything by choosing to tinker around in Ubuntu. How'd Brad make do with his 16GB of fixed storage? Why is Zach

such a compulsive cleaner? And who's the Linux fanboy on staff? Read on to find out.

Linux user, loud and proud

I showed up to the Linux party pretty late. My first real experience came via Ubuntu 5.04 — better known as Hoary Hedgehog. I've been an unapologetic Ubuntu user ever since. We've certainly had our rough patches (what do you mean I have to add “options iwlgan 11n_disable50=1 11n_disable=1” to /etc/modprobe.d/iwlgan.conf just to get my WiFi working?), but since 2005 I've been a daily user of the open-source OS.



A number of things drew me to it — the price (free!), the geek cred, the tweakability and the thrill of trying something new. The transition to Linux was a learning experience (to say the least), but once I'd unlocked its secrets there was no turning back. With Ubuntu I wasn't learning how to do things with my OS, I was learning to make the OS do what I wanted.

Over the years we've had our battles — most frequently over WiFi — and I have lost some customizability in the name of aesthetic beauty and modernization thanks to Unity, but I keep coming back. Rarely, after spending a few days in Windows or OS X, do I find myself missing features when I fire up Ubuntu, but I often do when it's the other way around. Unlike other OSes I don't have to bolt on what I need — no Growl for notifications, Dexpot for virtual desktops or an alternative file manager with tabs. It's all baked in.

As far as distros go, Ubuntu is about

as user-friendly as it gets. But I'll be honest: that isn't saying much. I may like — nay, love — Ubuntu, but it's not for everyone. If you like to tinker and don't mind poking around in the terminal occasionally it's great, but for all its usability improvements it is still Linux. Getting Oneiric Ocelot up and running on my MacBook was a three-day project and it was only through trial and error that I found the right options to add to some obscure text file that solved my ThinkPad's WiFi problems. Still, while it may have to split time with Microsoft and Apple, when I have the choice — it's the alliteration-loving OS dressed in aubergine I keep coming back to.

— *Terrence O'Brien*

Sidestepping 16GB of iPhone storage

Before we could appreciate the good graces of an iPhone 4S with a full 64GB of internal storage, we had to find other, more resourceful ways to satisfy our need for as many movies and songs as we could gulp up. I used to think that 16GB of free space was plenty; after all, I thought, it's easy enough to swap out playlists, right? Not any more. Now that my kids are getting older, I've discovered how nice it is to store enough Disney animated classics (no Bieber Fever so far) to keep them happy on long road trips in the minivan, and let's not even discuss finding room for fairy tale soundtracks in addition to my own depository of tunes.

After a bit of searching, I settled on



Kingston's Wi-Drive as an alternative to swapping out my phone for a beefier model. The idea is simple: you can choose between 16GB and 32GB of storage space on a WiFi-enabled puck, coincidentally crafted in a similar fashion as an iPhone 3G or iPod Touch. Download a special app and hook the puck up to your iDevice's WiFi connection, and you can wirelessly stream any of that data to that app — music, videos and pictures can all be viewed pretty easily. It's on its way to Android devices soon, so you needn't worry about changing teams just to take advantage of the service.

The Wi-Drive works well, aside from a slight delay in response time — unsurprising, since a third party app is attempting to access an external device and stream it wirelessly in real-time — but we have a hard time justify-

ing the cost of the unit (Amazon offers the 16GB model for \$80 and 32GB for \$100), since there are so many other products out there that do the same thing. The Drive's useful to anyone who spends a lot of time traveling outside of 3G coverage or has a tiered data plan, as it doesn't require an active internet connection to work; if you don't meet the criteria, however, plenty of data-mandated services (for both iOS and Android) offer the ability to wirelessly sync with the cloud or even your home desktop. And if you need more than 32GB extra storage space, various manufacturers make more expensive external drives that offer much higher capacity. Still, with Android compatibility on its way, the Wi-Drive is a decent idea to put on that holiday wish list.

— *Brad Molen*

Sucking up with a cordless Dyson


A second vacuum cleaner may not seem like a reasonable purchase for someone living in a two-bedroom apartment, so dropping \$300 on a cordless Dyson that can't even handle big cleanings could even be classified as reckless. But does that fiscal irresponsibility translate to buyers' remorse? No, not quite. I can probably count on one hand the number of hours that I spend in my apartment each week (not counting sleep), and the last thing I want to do during my precious personal time is deal with the heft (and lengthy cord) of a full-size vacuum.

The Dyson DC35 Digital Slim Multi Floor Vacuum definitely doesn't have enough power to serve as your one and only cleaning tool, but it's done a fine job of sucking up the dust that accrues when I'm not home. The DC35 is not entirely cordless — you'll need to connect it to the wall-mountable plastic dock (or directly to the AC adapter) to charge — but I was able to vacuum the entire apartment without tethering to an outlet — not to mention, any sign that the battery was nearing depletion. The only major issue I have is the tiny

waste bin, which I found myself emptying every few minutes.

The DC35 is even more versatile than a full-size model in some regards, since its miniature cleaning head can reach under furniture or around tight corners that a larger vacuum wouldn't have a chance of getting to. I was able to retrieve quite a bit of dust from under my bed and from under the kitchen



counter — areas that only brooms have touched before. So, to recap: it's small, moderately powerful, runs on batteries and lives up to the Dyson name, but it costs \$300. I'm sold, but that's a lot to spend on any cleaning gadget — especially one that won't replace your full-size vac. — *Zach Honig* 



review

HTC Rhyme

BY LYDIA LEAVITT

The HTC Rhyme is one of the newest additions to the Verizon wireless lineup, setting itself apart from the rest of the family since it's specifically for women — or hipsters who like purple. This time around, the company decided to focus on the accessories, leading its marketing campaign with a glowing purse charm to avoid missing calls — a fate all too familiar for gals whose phone is oftentimes buried at the bottom of a Louis Vuitton.

Unfortunately, we've been skipped over when it comes to some of the fea-

tures popular with higher-end, more macho phones like the Droid RAZR or the Galaxy Nexus. Sorry, ladies, no 4- or 4.3-inch touchscreen, no 4G LTE and *certainly* no dual-core processor. Instead, this phone is pretty run-of-the-mill, with a 3.7-inch capacitive touchscreen, single-core, 1GHz processor, a WVGA display, a 5 megapixel rear-facing and VGA front-facing camera, as well as an 8GB microSD card. Running the newest Sense 3.5 UI atop Gingerbread, the Rhyme offers a unique user experience for those who like HTC's



custom UI and, of course, the color purple. But is this phone powerful enough to keep up with the multitasking mayhem that is a day in the life of a modern woman? Read on to find out.

Hardware

The featherweight candybar-style phone looks almost as delicious as it sounds with a pearlized grape-colored border peeking out from behind the WVGA touchscreen. That accent extends around the display, cutting across the back of the phone, much like a piece of ribbon would wrap around a present — almost identical to the Status or Flyer tablet, only with a dose of Dimetapp purple. A more subdued

shade of plum makes up the rest of the back, which is constructed out of HTC's signature soft-touch plastic.

Turn the phone over and you'll find a single LED flash, 5 megapixel camera, a speaker and some electrical charging points — not to be confused with the inductive variety on the Droid Incredible 2. By popping off the battery cover, users will see a 1600mAh battery along with an 8GB pre-installed microSD card. Embedded into the back, there's the phone's antenna. You'll get a sneak peek of what's inside the phone through the translucent casing, but that's about all you'll be able to see as the battery is non-removable, much to our disappointment.

Although rather petite, the 4.58-ounce (130g) phone felt solid, similar to some other HTC phones. Unlike slick plastic handsets and the shatter-prone iPhone 4, the soft material used here makes the Rhyme easy to grip, and inspires some confidence in its durability. Oddly, though, this petite phone wasn't any more unwieldy than the 4- and 4.3-inch handsets we've tested recently, so we're not really sure why HTC skimped on screen. Maybe the company assumed our manicured mitts couldn't handle something larger.

The phone measures 4.69 x 2.39 x .43 inches (119.13 x 60.7 x 10.9 mm) with a similar, but not identical layout to the Droid Incredible 2. Along the top, you'll find the power button coupled with a noise-canceling microphone and headphone jack. The right edge houses a volume rocker, with a micro-USB socket and charging port tucked on the left. The micro-USB port is protected by a thin piece of plastic so precarious, we're surprised we didn't break it in half already. Lastly, the bottom of the phone rocks a secondary mic, helping to make calls sound reasonably crisp. The 3.7-inch WVGA touchscreen features the VGA front-facing camera, flashing LED notification light and Verizon logo. At the bottom of the screen you'll find your requisite haptic touch controls, including home, menu, back and search buttons. On the backside of the camera there's an LED flash, 5 megapixel autofocus camera, a low powered speaker and the aforementioned electrical charging

points. The WVGA display is bright and sharp, offering generally impressive viewing angles from far left or far right — although, the quality was impeded in strong sunlight. As far as clarity goes, the Rhyme boasts a 252ppi screen compared to the iPhone 4's 325ppi, making it lower-end, but no slouch as far as screen clarity goes — doing the photos we snapped in Central Park justice.

Performance and battery life

The Rhyme features Qualcomm's MSM8655, a 1GHz Snapdragon processor with Adreno 205 GPU — the same processor found in the Incredible 2 and the HTC Thunderbolt. Sure, it's no dual-core processor but it's still snappy and powerful with 768MB of RAM to keep it trucking. Switching between screens was responsive, with quick animations keeping up with us. Much to our dismay, we started to see some lag once the apps were opened, taking an extra second to respond. Similar to the Incredible 2 and the Thunderbolt, the Rhyme clocked a Quadrant score of around 1,400 to 1,700. Radios include the standard WiFi 802.11 b/g/n, Bluetooth 3.0 + EDR, CDMA / EVDO Rev. A and GPS / AGPS. The sound was acceptable during regular calls, but reminiscent of a tin can while on speaker — especially when compared to calls made on the iPhone 4.

One of the biggest advantages of this phone was the battery life. With a promised 440 minutes (around seven hours) in active use, we were able to



get through the entire day and into the night without having to recharge. After using the phone throughout the day to snap photos, check emails and send out a few tweets, we left the phone unplugged overnight and still had some juice left over in the morning. Putting the battery to the test, we ran a video on loop until it sucked the battery dry — a task which took around seven and a half hours — quite an impressive feat for an Android phone. When you compare this phone to one like the HTC Thunderbolt, which sucked the battery dry in around five hours and 47 minutes, not having 4G *almost* seems like an upside.

Accessories

HTC is really pushing the accessories with this phone, including all of them with purchase. The main star is the purse charm, which plugs directly into the headphone jack and lights up when an incoming call is received. More of a novelty than a useful accessory, the charm did help us spot a call in a dimly lit restaurant, but was barely noticeable in daylight. Since it flashes for five minutes after the call is received, the light is really nothing more than a glorified girly notification LED. Another downside is the hardware designed to attach the orb to a purse. Sadly, the piece is completely inflexible, making



it impossible to attach the charm to most standard leather bags. If you do manage to attach the glow ball to your pocketbook, the long cord will act as an anchor, making it easier to retrieve the phone buried under a pile of receipts, doodads, packets of gum and other miscellaneous junk that tends to collect at the bottom of purses.

The other signature accessory is the tagliatelli-like, tangle-free headphones. The headphones barely stayed in our ears and delivered scratchy and downright embarrassing sound quality.

The best-made and most useful accessory is the charging cradle, which holds the phone at an angle perfect for watch-

ing movies or repurposing the thing as an alarm clock.

Camera

One of the things we like most about the Rhyme is the camera function. Although not extremely top-of-the-line, the feature lets us add fun effects like Vignette and Distortion without having to download an additional app and relying on internet access to doctor our photos. Like a point-and-shoot, the phone's autofocus camera allows users to select options like action, portrait burst, HDR and panorama to optimize mobile picture-taking. For more established photographers, there are also manual settings like white balance, ISO and resolution for even more customized tweaking.

The rear-facing camera snaps 5 megapixel stills, while the front-facing one maxes out at VGA resolution. The latter also captures sharp 720p video and has options for lower resolution capture and slow-motion speeds. The front-facing camera can capture video as high as 640 x 480, and has options for low resolution video as well. When it comes to recording camera flicks, sound quality was decent, especially when capturing the general sounds of New York City – clearly the star in all our videos. In both video and picture-taking mode, the camera can be adjusted by tapping the screen along with zoom using the volume rocker or slider option.

Overall, the daytime photos we shot were crisp and clean, while photos taken in low light suffered a bit, although the



function did balance the light somewhat effectively.

Software

Like HTC's other phones, the Rhyme runs the company's custom Sense UI on top of Google's ubiquitous OS. This is the first phone to offer Sense 3.5, complete with new animations and a revised look and feel. One of the things you'll notice right off the bat is the home screen, which has widgets placed neatly to the side rather than under the clock. The clock and weather widgets have moved to the bottom right corner, and though they remain the focus of the home screen, they're markedly less in-your-face. Aside from the tweaked home layout, one of the main differences is the-

ability to remove panels on the screens, decluttering the sometimes chockablock feel of Sense when compared to previous versions.

This particular flavor of Sense is a bit different from the company's previous offerings, although it still has all the signature features that make Sense Sense. One of the major things we noticed about the latest version is the omission of the Verizon bloatware tab in the apps section. Unfortunately, this doesn't mean the phone is free from crapware, but at least there will not be a signature Verizon tab reminding you that it exists. You'll still have to deal with V CAST Music, VZ Navigator, V CAST Videos and other miscellaneous apps that we really have no use for. The amount of unnecessary apps and widgets like FriendStream clutter the phone and almost cheapen its Android integrity.

The phone was incredibly fickle when it came to email, forcing us to continually set up our mail time and time again, oftentimes giving us the error message "getting token failed." For the most part, we had trouble accessing our mail reliably through the Gmail app, although we were able to access it through the notifications bar upon occasion. When searching for a solution, we found that other people were having the exact same problem, to which the major recommendation was to remove mail settings and start again — what a pain.


Wrap-up

When the HTC Rhyme first arrived on

the scene, Verizon's major focus seemed to be on the marketing angle rather than the meat of the phone. Widely understood to be a lady phone, the Rhyme's promise as a piece of hardware got lost amid stereotypes painting women as ditzes who need a sparkling light to find their phone underneath tubes of lipstick. Surprisingly, HTC has adamantly denied that this is a phone geared towards women.

Of course, the phone itself isn't that bad — the hardware is beautiful and it has a 1GHz Snapdragon processor to power it through snappy transitions and multitasking. But why doesn't the lady phone have a dual-core processor, 4G LTE or perhaps a 4- to 4.3-inch higher quality screen? Considering that the accessories are the main selling point for the phone, it's remarkable how poorly made they are. The main one — the charm — wouldn't attach to any of our favorite purses and the glowing orb was hardly

bright enough to alert us of an incoming call on a sunny day. Add in cheap headphones that barely stayed put in our ears and overall, it seems like the Rhyme is just another run-of-the-mill Android smartphone.

Beyond the hardware, liking the phone comes down to liking Sense. To us, a cool weather and clock widget aren't enough to save us from the annoyance of things like pre-loaded Verizon crapware and FriendStream, but as always, it's a matter of preference. If you love purple and you love Sense, then the Rhyme's for you. For the rest of us, we'll just stick with "male" phones. 

Lydia is an NYC-based closet nerd who goes through shiny new gizmos faster than she hops continents. A mobile phone fanatic and social networking princess, she is rarely seen without her phone handy to capture a photo or send out a tweet.

BOTTOMLINE

HTC Rhyme

\$199 on contract

PROS

- Beautiful hardware
- Good battery life
- Useful camera effects

CONS

- Too much Verizon bloatware
- Middling specs for a \$200 handset
- Poorly made accessories

This mid-range phone and subpar accessories are hardly enough to keep up with the modern, multitasking woman — even if it is purple..



review

Grace One City e-motorbike

BY TIM STEVENS

There comes a time in nearly everyone's life when they need to get up, get out the door and get to work. Some drive, some walk, some take one form of public transportation or another — but a noble few do something different. Those people ride their bikes, holding on to the passion gained in a childhood of racing around the neighborhood on Huffys and Schwinns, skinning knees or elbows when the latest attempt at a sweet jump turned sour.

The Grace One will shred your commute in record time but takes away some of the achievement found in riding to work.

Sure, those people may say they're saving money or the environment by riding a bike into work, but we all know they do it for fun. As is the case with most wheeled pursuits, the fun factor increases with the speed, and with that idea we welcome you to the Grace One. It's a German electric bike that offers more high-tech trappings than your average economy car — a good thing, because it costs nearly as much as one. What does this \$6,000



The Grace One City e-motorbike might hit 25MPH, but speed comes at a cost — \$6,000 to be exact.

road. Get a little closer and you'll notice the minimal tread on the tires and, while there is suspension up on the front forks, the default stiffness of them is punishing on anything short of smooth roads. That bit of damping isn't there for comfort or to ease the landings from those jumps — its to help keep the front tire on the ground under hard braking.

And given how fast you can go on this thing without breaking a sweat you'll frequently be calling on those Magura disc brakes, mounted front and rear. They're more than powerful enough to lock up their respective tires on dry asphalt, so go gentle on those stubby aluminum levers mounted on either end of the straight but nicely tapered handlebars.

On the left grip is a twist-shifter, offering a slightly underwhelming nine speeds to the rider. On the right grip is what sets this apart: a twist throttle. With just a little twist of the wrist you can unleash this bike's secret weapon: a 1.3kW motor mounted inside the rear wheel.

bike offer? Speed. Sweet, effortless speed (up to 25MPH without you burning a single calorie), and we recently had the chance to put one through its paces. Read on to see how we fared.

Hardware

From a distance, the Grace One looks something like a crude, heavy, over-built mountain bike that rolled off the assembly line in 1983. The frame is hugely thick, the top tube is nearly parallel to the ground and is *way* up there, and the construction just seems far more beefy than is required.

This bike, though, is meant for the

That motor will spin you up to 25MPH, but when you pedal you spin the wheel *and* the motor, so you can actually add to the equation. It's powered by 15 pounds (6.6kg) of cells, inserted in that top tube on the frame, which goes a long way to explaining why it's as chunky as it is. That also explains why the bike is as heavy as it is — about 80 pounds (34.6kg), and that's despite aluminum construction and a series of top-shelf, lightweight parts.

The other big clue that the Grace One isn't your *average* bike is the dash cluster mounted up on the bars. On a simple, two-line LCD readout you get information on battery status, range covered and a speedometer. What don't you get? A simple battery readout — there's no easy-to-read fuel gauge.

There is, however, a horn, and both high- and low-beam headlights up front. Both are surprisingly effective.

Riding

Throwing a leg over the Grace One is a task best performed by folks with long legs. The seat, lowered as far as it would go, was still an uncomfortable stretch for a six-foot-tall reviewer, and stand-

ing flat-footed required tipping the bike to one side and letting the top tube go places only particularly intimate pieces of clothing belong.

On a normal bike this would make moving away from a dead stop something of a clumsy affair — a hop and a hard pump required to get away with a wobbly start. Here, though, it's easy: just twist the right grip. Regardless of what gear you're in the motor will pull you away from a dead stop and nearly instantly have you going fast enough to stabilize the bike. Training wheels were never more unnecessary.

The thing doesn't exactly accelerate like a sportsbike — no worries about dislocated shoulders from the torque — but it gets up to speed quickly. We never tired of lining up at a stoplight next to a taxi cab and comprehensively leaving every tired Crown Vic in our dust when the light turned green. Sure, a few moments later the yellow junker would go rattling by, but anyone who's ever ridden in a NYC cab knows that their drivers are not light on the throttle when the light goes green. That kind of acceleration from a bicycle is... unusual. The bike, with its fat tires and solid

... Standing flat-footed required tipping the bike to one side and letting the top tube go places only particularly intimate pieces of clothing belong.



The bike's motor will get you up to 25MPH alone, but with a little pedal-power we reached a full 42MPH.

doesn't put your rear too high or too much weight on the bars. But, if that's the kind of posture you're looking for, there's certainly room to raise the slender seat far higher.

construction, is very easy to ride. It may have top speed on its side but it's hardly a razor-edged racer with mustache handlebars and tires so skinny they seem liable to cut the tarmac in two. With the seat all the way down the riding position is reasonably comfortable, a geometry that feels like a casual bike and

Speed and range

And what about that speed? With failing batteries after a day of hard riding (we covered about 22 miles on a charge) we topped out at 42MPH on flat ground. With some taller gearing and a bit of help from an incline we're sure we could have done better — but ultimate speed

isn't really the story here. It's *effortless* speed that's the key. You can haul posterior on a traditional bike and go as fast as you dare and your legs will carry you, but here you can do it with ease.

Twist the throttle and within a moment you'll be keeping pace with traffic on a busy street. Pedal a little and you'll be passing cars with abandon. It's easy, real easy, which is both good and bad. It's good because it leaves you less stressed, your mind a little more free to look out for suicidal iPod-wearing pedestrians and for parallel parkers who can't wait to open a door in your path. Not having to worry about pedaling means you can focus on staying alive.

But, it completely sucks the feeling of accomplishment out of the overall experience. When you ride a traditional bike in to work you can take pride in knowing that you schlepped yourself up and over every hill in your path. It's okay that you're sweaty, winded and have helmet hair — you've earned it. Here, not so much. Here you're mostly a passenger. The bike is plenty fast on its own; the Grace One only needs you to twist the throttle and keep it upright and pointed in the right direction. That's no more difficult than (gasp) driving a car.

Wrap-up

So the Grace One is not the all-organic, pesticide-free, soul-enriching experience of pedaling your way to work on a bike that lacks batteries. But, *damn* it is a lot of fun to ride. This is a bike for people who want to carve through traf-

BOTTOMLINE

Grace One City

€ 4,199

PROS


- Effortless speed
- Plenty of trick tech
- Beautiful, simple styling

CONS

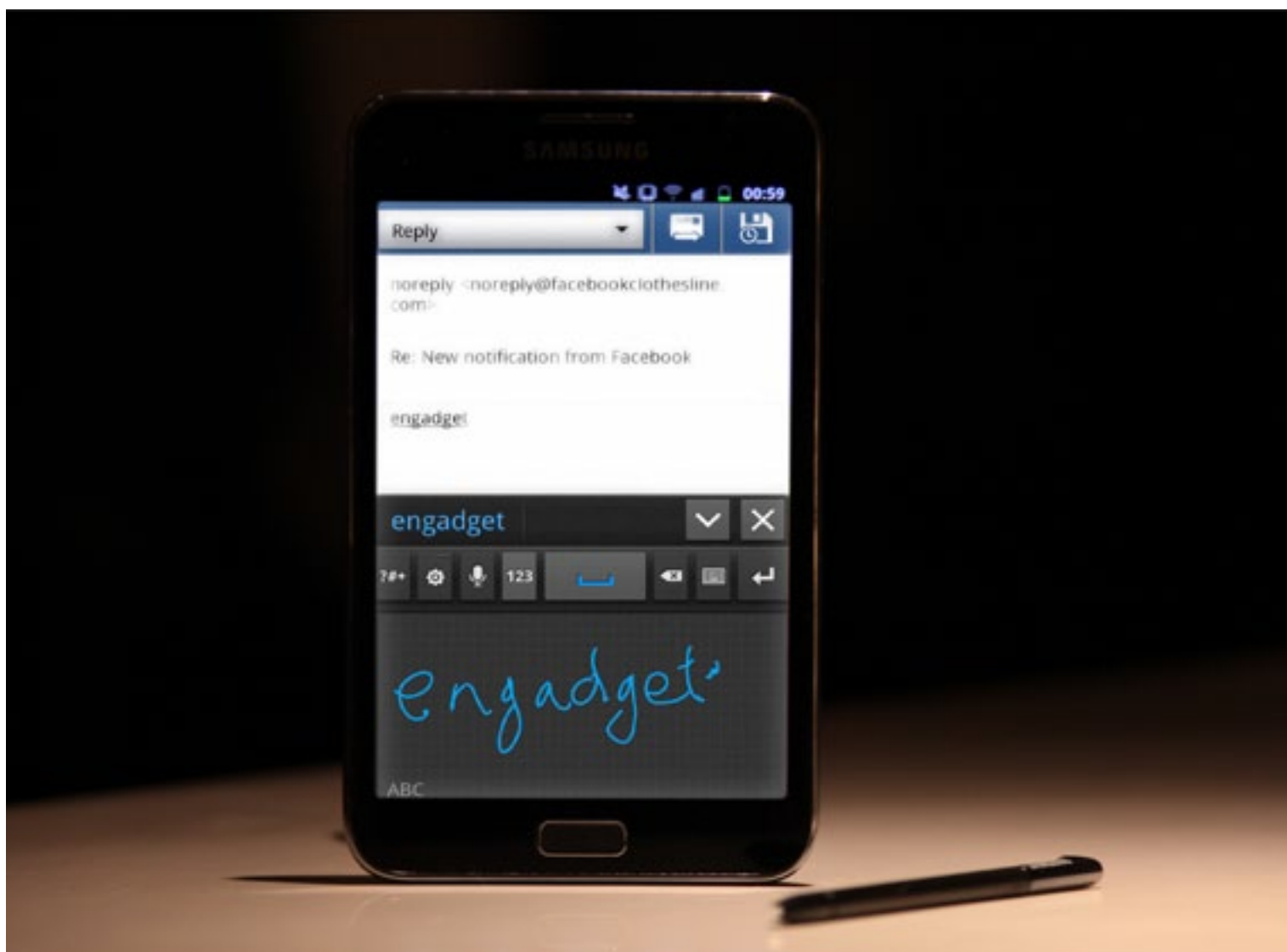
- High weight
- High cost
- High seat

The Grace One will shred your commute in record time but takes away some of the achievement found in riding to work.

fic and flowing roads with ease. This is a bike for people who want something exotic. This is a bike for people who crave speed and don't necessarily have the quads, glutes and calves to get it on their own.

And, it must be said, this is a bike for people with an awful lot of disposable income. Sadly, that's not us — but we wish that it were. 

Tim Stevens is Editor-in-chief at Engadget, a lifelong gamer, a wanna-be racer, and a born Vermonter.



review

Samsung Galaxy Note

BY ZACH HONIG

Remember the display on your first mobile phone? If you've been chatting on the go for as long as we have, it was probably barely big enough to fit a complete telephone number — let alone a contact name or text message. And your first smartphone? Even displaying scaled-down, WAP versions of web pages was asking a lot. Now, those mobile devices we couldn't live without have screens that are much, much larger. Sometimes, though, we secretly wish they were even bigger still.

Samsung's new GT-N7000 Galaxy

Note is the handset those dreams are made of — if you happen to share that dream about obnoxiously large smartphones, that is. It's as thin as a Galaxy S II, lightning fast and its 5.3-inch HD Super AMOLED display is as gorgeous as it is enormous; the 1280 x 800 pixels you once could only get with a full-size laptop (or in the Galaxy Tab 10.1) can now slide comfortably into your front pocket. Its jumbo display makes it the perfect candidate for a notepad replacement and, with the included S Pen stylus, you'll have no problem jotting notes



on the fly, marking up screenshots or signing documents electronically. But, is that *massive* display too much of a good thing? Read on ahead to find out.

Hardware

If you were holding out for a device that bridges the gap between smartphone and tablet, you'll want to take Note. It's an absolutely massive Android handset and a high-res pocketable tablet rolled into one. If you have the hands to support it, it may just be the best thing to happen to mobile devices since the capacitive touchscreen. You can take notes, doodle between (or during) meetings and make phone calls. Those calls can be placed using the built-in earpiece and mic, or via a Bluetooth headset, which we would recom-

mend. Holding something this large up to your ear can be rather unpleasant — and unsightly.

If you've used a Samsung Galaxy S II, then you're already familiar with the Note — the design is quite similar, though it's significantly larger, measuring 146.85 x 82.95 x 9.65mm, compared with 125.3 x 66.1 x 8.49mm for the GS II. It's significantly heavier too: 178 grams (6.3 ounces) compared to its 116g (4.09-ounce) predecessor. There's an eight megapixel camera with LED flash on the back and a two megapixel shooter up front. The Note may be awkwardly large for some functions, but snapping photos feels natural enough. There's also 1080 / 30p HD video recording, with support for MPEG-4, H.263 and H.264 codecs. You can store



all that multimedia on the 16GB of internal memory, expandable by up to 32GB with a microSD card — both of which can be accessed via the micro-USB port. There's also Bluetooth 3.0+ HS support and 802.11a/b/g/n WiFi.

With support for 21Mbps HSPA+ (850, 900, 1900, 2100Mhz), LTE, EDGE and GPRS (850, 900, 1800, 1900MHz), the Note is first and foremost a mobile phone — one that would be quite happy on AT&T if you wanted to import. You *could* carry it in one pocket with your celly in another, but you don't need to. It's running Android 2.3.5 (Gingerbread) powered by a 1.4GHz dual-core Samsung Exynos processor, which performed incredibly well during our bench-

mark tests (more on that later). The Note offers a full suite of sensors, including an accelerometer, compass and barometer, along with proximity and light. There's also A-GPS and GLONASS for enhanced positioning — even in Russia.

There's an earphone grill up top, just above the Samsung logo, followed by ambient light and proximity sensors to the right, then a front-facing cam near the edge. A single rectangular button at the bottom peeks out from beneath the display, flanked by touch-sensitive backlit return and menu controls. On the top right of the sleek silver bezel you'll find the power button, with a 3.5mm headphone jack up there too and volume slider on the left. The micro-USB connector is centered at the bottom, just to the left of where you slide in the S Pen. That's flush with the Note's flimsy plastic rear panel, which will only need removing when you want to insert a SIM or microSD card — or swap out the generous 2,500mAh battery.

Display

1280 x 800 pixels in a smartphone display is a feat, and it's just as impressive to behold as it sounds. The Note's 5.3-inch HD Super AMOLED screen is incredibly bright, vibrant and detailed, thanks to its 285ppi resolution. It doesn't have the highest pixel density in the world (the smaller Galaxy Nexus trumps it slightly, as does Apple's Retina panel in the iPhone 4 and 4S), but it's enough to make graphics amazingly smooth — you'll have a hard time see-

ing individual pixels with the naked eye. Viewing photos and graphics, web pages and even newspaper articles in PressReader is quite the treat when you have this much visual real estate.

Colors on the Note pop just as they do on the GS II, that eye-pleasing contrast and saturation we've come to love from Samsung's AMOLED displays, and little vibrancy is lost when viewed from the side. However, color accuracy does start to wander a bit. This is indeed a PenTile display, just like the upcoming Galaxy Nexus, and so there are more green sub-pixels than any other color. This gives everything a slightly sickly tinge, especially when viewed off-angle. Still, you'll have no problem watching videos or reviewing sketches with a group of friends — assuming they aren't hue purists.

If you fall within the camp of smartphone users that absolutely swears off onscreen keyboards, the Note's display may just win you over. A larger display means larger keys, which are easier to see and simpler to tap accurately — if you can reach them. You can also use the S Pen to replace the keyboard entirely, letting you write in individual letters or entire words. Character and handwriting recognition isn't perfect, but it is quite good. When we scribbled "hello" it was recognized perfectly, though less common words (particularly web addresses) were a little less reliable.

Loudspeaker / earpiece

The Note's speaker sure is loud, though

Samsung hasn't pulled any magic tricks out of the hat here when it comes to audio quality. Do you like listening to music or watching movies through tinny desktop speakers? Well, then you might not mind the Note. There's nothing exceptional about the little tweeter inside here besides its volume, so you'll want to take advantage of that 3.5mm headphone jack whenever possible. The only accessory Samsung included with our review sample was a UK power cord, so we can't speak to the pack-in headphones the company will provide, but unsurprisingly our own pair worked just fine.

There's an FM radio app, just in case you run out of stored tunes or want to leave the playlist generation up to a professional. You'll need to plug in a set of earphones to use as an antenna and our generic buds naturally seemed to do the trick — though we could only pull in a half dozen stations while standing next to a window in Central London, and the ones that we did get were mostly static.

If you do plan on making phone calls with the Note, you can expect average performance. We placed a few test calls — some local and some across the Atlantic — and things sounded just fine on both ends, though not overly crisp. Callers on the other end of the line were barely able to distinguish between calls made using the earpiece and those placed with the speakerphone, even when speaking a foot or two away from the handset. The Note's strengths clearly lie in what you can do with that gener-



ous display and S Pen, though it's a perfectly functional phone just the same.

Camera

It's safe to say that the device offered more than acceptable performance. That's to be expected, as it appears to be using the same sensor and camera getup we've loved in the other Galaxy S II iterations thus far. During our indoor shoot, the camera was able to balance color and exposure properly with most subjects in still mode. The autofocus worked well most of the time and the built-in flash popped with the correct amount of power — our subjects were not blown out. We needed to stay a few inches away from subjects in order to get the camera to focus, even in macro

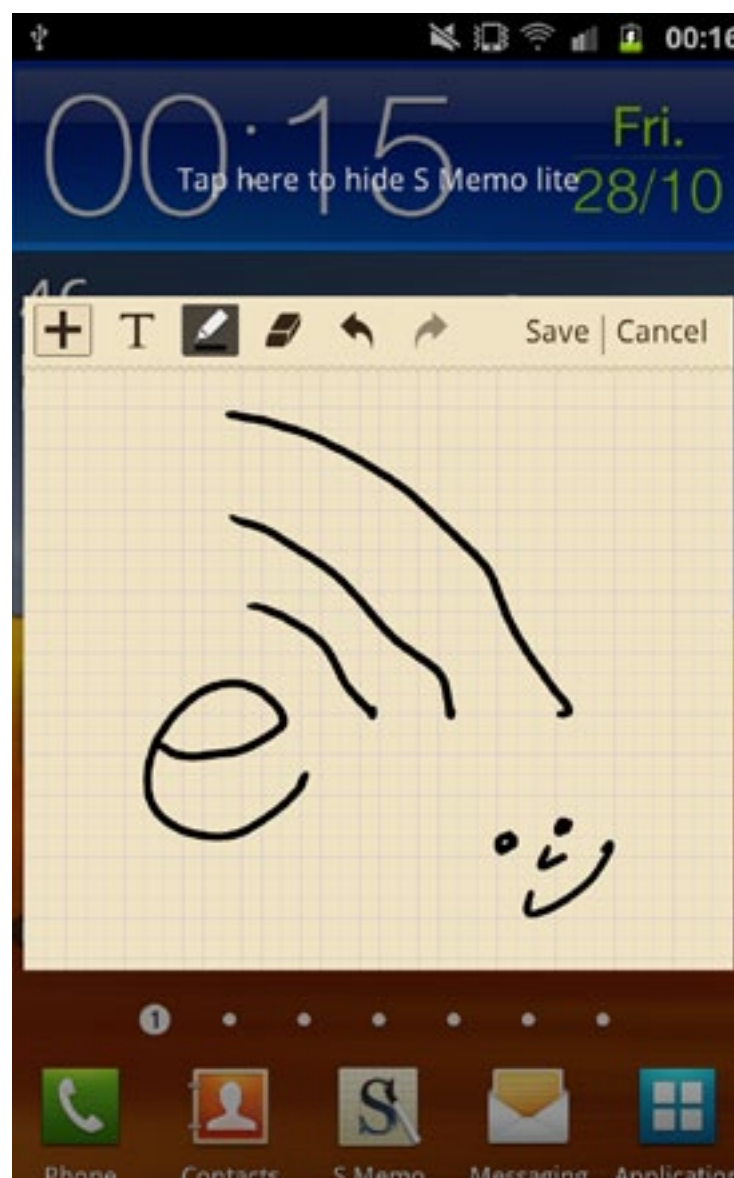
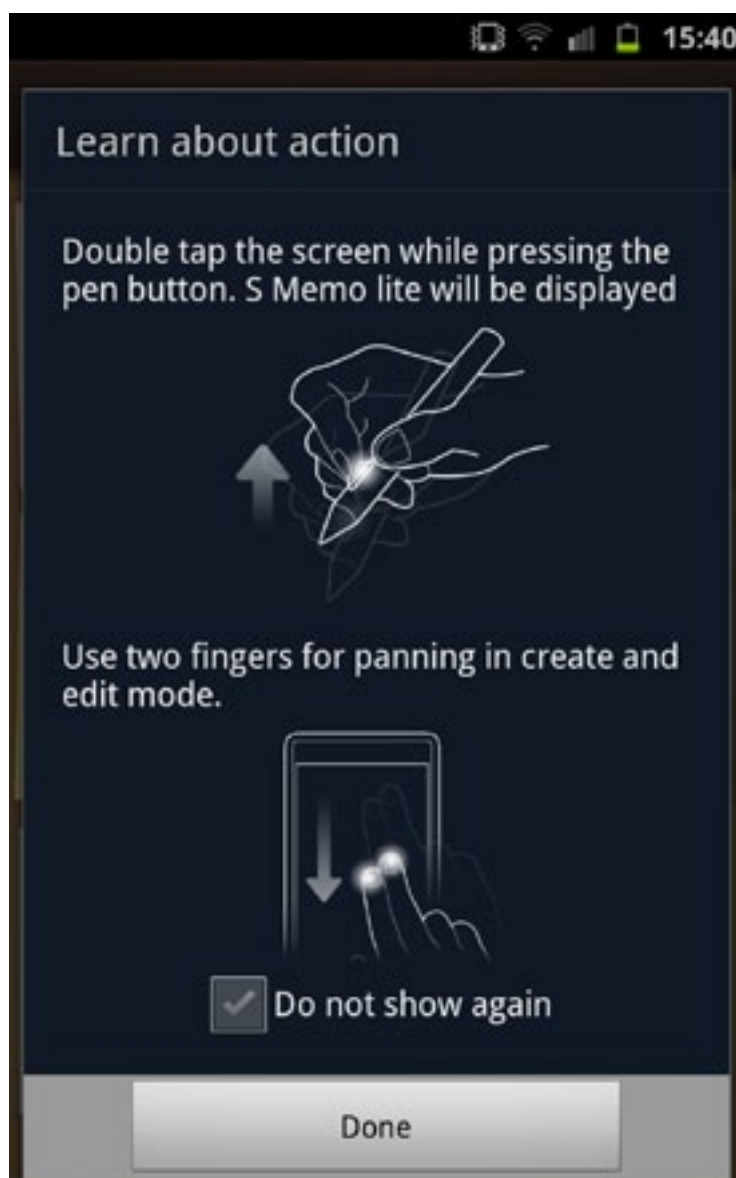
mode — so don't expect to be able to snap extreme close-ups. Also, noise was an issue in darker scenes and the camera was unable to compensate for low light in some areas.

In video mode, noise was a problem too, but in a different sort of way: the mic seemed a bit overboosted, picking up quite a *whoosh* with the slightest breeze. When filming, the camera had a difficult time focusing and exposing at times, with some elements left soft or overexposed. White balance was generally acceptable, but it did take a few seconds for the camera to adjust when moving quickly between scenes.

Software and S Pen

Don't call it a stylus! Samsung prefers





S Pen and, with features that you won't find on just any plastic poker, it might even deserve the distinction. One of our favorites is the ability to tap and hold to capture an instant screenshot, which is then immediately opened up in an image editor. There you can mark up the grab, circling elements, signing documents, making doodles — whatever you want to do, really. From there you can send it on to social media sites, email addresses or save it on the device.

Next up are some gestures that can be executed by holding the button on the S Pen and swiping. It's worth noting that button is practically microscopic.

Our fingers often had a hard time finding it. But, once located, you can hold it down and swipe up from the bottom of the screen to emulate pressing the menu button. Swipe on from the right to emulate the back button. There's no gesture replicating Home, but since it's an actual, physical button here you can always just stab at it with the stylus — or a finger, we suppose.

The phone has an integrated quick note function, which lets you pull up a sticky-size memo pad from any page on the device. Simply press the S Pen button and double tap — you can make a note, save it and pull it up eas-

ily later. The pad doubles in size when you access it from a dedicated app, giving you more space to make additional doodles. Like all of the drawing applications, you have a selection of pen styles, sizes and colors to choose from.

There are a variety of unique apps designed to take advantage of the S Pen, including the preloaded S Memo app,

more cleanly with the S Pen. The UI has certainly been Touchwiz'd, but as with the other recent Galaxy products we're fond of the customizations here.

Performance and benchmarks

The Galaxy Note may slot squarely in between a phone and a tablet in terms of physical dimensions, but when it

SPECS	GALAXY NOTE	GALAXY S II	GALAXY TAB 10.1
Quadrant	3,998	3,200	1,769
Linpack (single-thread)	64.3	55	23.67
Linpack (multi-thread)	95.66	81	41.22
Nenamark1	56.67	59.8	42.7
Neocore	51.77	59.8	N/A
SunSpider 9.1	2,902	3,369	2,330

which collects your quick memos and provides a platform for creating longer form notes, and a handful of downloadable apps, available through the S Choice store. Hello Crayon is designed for children to create colorful sketches with crayons and markers in a variety of colors — it may have been created for kids, but we still had a good time scribbling with it. Hello Color Pencil is quite similar but, as you've possibly guessed, swapping crayons for colored pencils. There's also Hello Chalk, and you can surely infer the medium of choice there.

Other than that we're looking at Android Gingerbread — a bit of a shame as the onscreen buttons in Ice Cream Sandwich would work much


comes to performance we're happy to report it leans much closer to the latter than the former — in many cases surpassing even that class of devices. We ran it through the gamut of typical benchmarks and found nearly everything predictably out-pacing this device's Galaxy S II predecessor.

In quadrant this husky phone threw down a 3,998, compared to the GS II's 3,200. Linpack single and multi found 64.30 and 95.66 MFLOPS, compared to 55 and 81. Nenamark 1 and 2 produced 57.67 and 32.8, it hit 51.77 at Neocore and ran through SunSpider in 2,902ms. These are very good scores, out-classing the Galaxy Tab 10.1 in most cases and raising the smartphone bar.



Wrap-Up

The Galaxy Note is one of those devices that you'll either completely love or totally hate — its sheer size alone will certainly be a barrier for those with smaller hands (or pockets). With the Note, Samsung has managed to create one of the world's largest smartphones, but cunningly it's also an incredibly compact tablet with a high-resolution display — the same as the Galaxy Tab 10.1 tablet — without the high-resolution footprint. It's compact enough to slip in your pocket and powerful enough to replace both of your portable devices.

Still, it won't be for everyone. This is one case where you'll *definitely* want to get your own hands on one before signing up to any two-year commitments, if only to see if it will fit in your hands as well as your budget. 

Zach is a Senior Associate Editor and heads up Engadget's features content. He's also a lifetime lover of everything aviation and photography.

James Trew, Sharif Sakr and Myriam Joire contributed to this review

BOTTOMLINE

Samsung Galaxy Note

\$TBA

PROS

- Excellent Performance
- Enormous, high-res Super AMOLED display
- S Pen is a clever, no-compromise addition
- Good call and speaker quality

CONS

- May be too large for some
- Awkward to use for voice calls
- S Pen button rather small

Samsung's Galaxy Note is massively good but simply too massive for some.

Who will emerge as the next STEVE JOBS?

BY BOX BROWN



Bill Gates
Former CEO and current chairman of Microsoft

Likelihood: 1 in 50



Ted Turner
Founder of CNN, former owner of the Atlanta Braves, WCW, Ted's Montana Grill

Likelihood: 1 in 500



Larry Page
Co-founder and CEO of Google

Likelihood: 1 in 20



Mark Zuckerberg
Co-founder of Facebook world's youngest billionaire.

Likelihood: 1 in 100



Reed Hastings
Co-founder and CEO of Netflix

Likelihood: 1 in 300



Greg Creed
President and CEO of Taco Bell.

Likelihood: 1 in 10,000

the last word

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3 HOURS AGO iPhone 5 to have 21Mbps HSPA+ data? China Unicom says so

30 MINS AGO **Dell confirms XPS 14z will go on sale in the US in the 'coming weeks'**
Remember that XPS 14z Dell teased at IFA? Yeah, well, it's arriving soon. As in, "the coming weeks" soon. The company just confirmed it's on the cusp of shipping here in the states, and while the outfit stopped short of giving a starting price, it's good and ready to talk specs. As we reported last month, it has the same industri...
By Dana Wollman September 29, 2011 12:35PM

54 MINS AGO **iPhone 5 cases and realistic unibody dummy show off incredible slimness**
While we're only five days away from finding out the true appearance of the next-generation iPhone, our good friends over at BENM.AT went ahead and crafted their very own unibody dummy using CAD drawings, CNC tools and a block of aluminum -- seriously, that's how they roll! Granted, this work's only based on...
By Richard Lai September 29, 2011 12:13PM

1 HOUR AGO **Kobo's Vox Android tablet appears online briefly, gets Canadian release date and pricing**
A day after another little-known e-reader manufacturer announced a tablet, a new Android slate from Kobo made a brief online appearance on Future Shop's site, only to be quickly taken down. According to the Canadian retailer, the FCC-approved tablet will offer up a 7-inch display with a 1024 x 600 resolution, WiF...
By Brian Heater September 29, 2011 11:53AM

Iceland gets a data center to call its own, still believes in fairies
You say Iceland, we immediately think Eyjafjallajökull -- and no, we haven't had a narcoleptic collapse upon these very keys. It's been over a year since that volcano swept the headlines and interrupted air travel, providing outsiders with a skewed

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